

SUMMARY OF OUTSTANDING ACCOMPLISHMENTS:

MISSOURI ENVIRONMENTAL REVIEW AND COORDINATION INITIATIVES

In 1997, the Missouri Department of Transportation (MoDOT) developed a "Strategic Total Transportation Plan (Plan)" that was designed to provide Missourians with a total transportation system that enhances their quality of life, economic development and well being. In terms of supporting and enhancing the quality of life, the Plan includes satisfying the mobility needs of the traveling public through safe, cost-effective transportation choices that are environmentally sound and energy-efficient. During implementation of the Plan, MoDOT recognized that integration of transportation decisions through coordination (i.e., information sharing) with other state and federal resource and regulatory agencies was critical to ensure compatibility of Missouri's growing transportation system with the state's rich heritage of environmental resources.

Even before implementation of the Plan, MoDOT has been among the leading states which have adopted collaborative approaches for transportation planning and project development. Such an approach by the Pennsylvania Department of Transportation (Penn DOT) was presented as an example of a lead state at the *National Conference on Transportation and Environment for the 21st Century*. Missouri's perspectives and approaches in environmental stewardship include streamlining the environmental coordination process through interagency agreements, developing cost-share partnerships, and entering into contracts with professionals in other state and federal agencies for environmentally-related work. In many cases, such efforts have gone well beyond regulatory compliance and have received notoriety as enhancements to environmental resources. Some outstanding examples where MoDOT has reduced project and process delays and saved costs are described below.

With implementation of the Plan, MoDOT embarked on an ambitious rate of project delivery; more projects increase the need for more environmental review and reduce the time budget for project completion. To accomplish these goals, accurate up-to-date information on the full range of potential environmental impacts becomes crucial to meet regulatory agency requirements and to gain public acceptance. For almost a decade, MoDOT has been using Geographic Information System (GIS) applications in its business processes. However, GIS applications had been somewhat limited due to the inavailability of spatial data. To combat the high costs of spatial data acquisition and development, MoDOT helped to establish (1994) the Missouri Resource Assessment Partnership (MoRAP). A consortium of more than eleven state and federal agencies, MoRAP staff and facilities provide information and technical support for the development and use of digital databases for natural resource planning and management; it also serves as a repository for Missouri's natural resource data. Much of this spatial data is also made available to the public through the Missouri Spatial Data Information Service. As a partner, MoDOT has accurate and timely spatial data statewide at the lowest possible cost. As an additional benefit, this working partnership with resource and

regulatory agencies is viewed as further integrating and enhancing interagency coordination. Attesting to the success of this partnership, the National Awards Council, part of Renew America, awarded a Certificate of Environmental Achievement to MoRAP in 1999 in recognition of its innovative partnership; two MoRAP staff received the Sutton Award for Conservation Research from the Southwestern Association of Naturalists.

A cost sharing agreement between MoDOT and the Missouri Department of Conservation (MDC) provides MoDOT environmental specialists unlimited access to over 30 databases (cross-referenced spatially and manually) on more than 800 species which are endangered, threatened or otherwise considered sensitive and on hundreds of natural communities. In addition, more than 100 regional maintenance superintendents and more than 37 area engineers in MoDOT have access to these data for their projects and have been trained on how to use the information. Funding from MoDOT also supports a full-time coordinator's position in MDC which gives MoDOT projects top priority. Because of this relationship, other agencies have recognized MoDOT's strong commitment to protecting the environment. As a result, statewide construction and maintenance activities are carried out quickly and smoothly through increased credibility, accurate communications, and proven environmental compliance, thereby avoiding or reducing project and process delays.

Aerial photography has long been a traditional tool for developing location and environmental studies for transportation projects. However, until the advent of GIS, overlaying all of the environmental constraints for a project location was tedious and time consuming. In addition, last minute modifications to project location and design illustrations often resulted in project delays. However, in 1993 the U.S. Geological Survey (USGS) began producing Digital Orthophoto Quarter-Quadrangles (DOQQ). A DOQQ combines the image characteristics of a photograph with the geometric qualities of a map; the finished product is a spatially accurate image with planimetric features represented in their true geographic positions. To facilitate the statewide development of these products, MoDOT entered into a joint funding agreement with the USGS, the Farm Services Agency (USDA), the Natural Resources Conservation Service (USDA), and the MDC. The three-year project resulted in 100% statewide digital quarter-quadrangle files that can be combined to provide displays and analysis tools for MoDOT's GIS applications. MoDOT's cost for this data development was only 13% of the \$5 million total project costs. While the availability of DOQQs will not totally replace customized photogrammetric products at lower resolution scales for design purposes, it has eliminated the need to use photogrammetric facilities at the earliest planning evaluation stages of project development, resulting in savings of cost and time. Through an agreement with the University of Missouri, the DOQQ products will be made available to the public in the near future.